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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/500,897	02/09/2000	Shunpei Yamazaki	SEL 161	3195

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EXAMINER

MISLEH, JUSTIN P

ART UNIT	PAPER NUMBER
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2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/500,897	Applicant(s) YAMAZAKI ET AL.	
	Examiner JUSTIN P. MISLEH	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 32, 34 - 38, 40, 41, 48 - 50, 52 - 56, 58 and 59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 32, 34 - 38, 40, 41, 48 - 50, 52 - 56, 58 and 59 is/are rejected.
- 7) ☒ Claim(s) 66 - 69 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 20, 2009 has been entered.

Response to Arguments

2. Applicant's arguments filed July 20, 2009 have been fully considered but they are not persuasive.

3. Amended independent Claims 1 and 36 simply recite therein, “an electroluminescence display device attached to the body, the electroluminescence display device being configured to project an image to only one eye of a user;” and, amended independent Claims 48 and 54 simply recite therein, “a viewfinder for only one eye of a user, the viewfinder including an electroluminescence display device attached to the body.”

4. It has been established that Takahara, the primary reference, discloses a camera, a body of the camera and an electroluminescence display device attached to the body. See figures 218 and 219. It is clear that the viewfinder shown in those figures is a standard video camera viewfinder designed for only a single eye of the user. In other words, the eyepiece rubber (2187) is designed to cup around an eye socket of the user. Figure 219 shows that the

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electroluminescence display panel (22) is mounted within this viewfinder with an image being projected through the eyepiece ring (2184) to outside the viewfinder. Thus, on that basis alone, Takahara disclose a view finder and electroluminescence display device that is configured to project an image to only one eye of a user.

5. However, on the other hand, Nishiguchi also discloses an electroluminescence display device (see figure 7) where one of the surfaces of the substrate of the display device is configured as lenticular lens element. Nishiguchi's primary purpose for the display device is designed for and used to view 3D images. To actually view 3D images, a user must wear polarization glasses (110). Albeit, Nishiguchi also teaches that the same display device may be used to view 2D images (see column 22, lines 20 – 28). In other words, the user simply does not wear the polarization glasses (110).

6. Thus, Applicant's argument is that if the display panel (22), in Takahara, were modified by the display panel (130), in Nishiguchi, the electroluminescence display device and/or view finder can no longer be configured to project an image to only one eye of a user. The Examiner respectfully disagrees with Applicant's position.

7. First, the view finder in Takahara alone is configured for only one eye of a user. Thus, any display device contained therein would be forced to project images to only one eye of a user. Second, the display device of Nishiguchi is capable of projecting images in 2D or 3D. Thus, replacing the display device in Takahara with the display device of Nishiguchi would neither destroy the operability nor the intentions of either disclosure. Third, the Examiner respectfully notes that in each of Applicant's embodiments of figures 1, 2, 3A, 3C, 4, 5 and, most particularly, 7A, the only way the electroluminescence display device is configured to project an

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image to only one eye of a user is by its arrangement within the view finder of the camera. In other words, the Examiner respectfully submits there are no structural features of the display device itself that force an image to be projected to only one eye of a user. Therefore, for all of these reasons, the rejection will be maintained.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1, 3, 32, 34, 35, 48 – 50, 52 and 53** are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahara (US 6,219,113 B1) in view of Nishio et al. (US 6,046,547) in further view of Nishiguchi (US 6,046,787).

The Examiner respectfully notes the only difference between Claims 1 and 48 is that Claim 1 requires, *inter alia*, “a camera comprising: a body of the camera; and an electroluminescence display device attached to the body, the electroluminescence display device” and Claim 48 requires, *inter alia*, “a camera comprising: a body of the camera; and a view finder including an electroluminescence display device attached to the body, the electroluminescence display device”. Claim 48 appears to fully encompass Claim 1 – accordingly, they will be rejected together using the language of Claim 48.

10. For **Claims 1 and 48**, Takahara discloses, as shown in figures 218 and 219 and as stated in column 122 (line 37) – 123 (line 16), a camera comprising: a body of the camera (2186); and a

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view finder (see figure 219) including a display device (22) attached to the body, wherein the viewfinder is configured to project an image to only one eye of a user (see figure 218). Takahara further discloses, as stated in column 30 (lines 51 – 65), wherein the display device (22) may be an electroluminescence display device (“the present invention is not limited to the active matrix display panel ... [the] technical idea of the present invention ... is applicable to ... an organic EL display panel”).

While Takahara shows a camera having a view finder with an electroluminescence display device, Takahara does not disclose the construction or the internal components of the electroluminescence display device. Accordingly, Takahara does not necessarily disclose a substrate, a thin film transistor, a planarizing film, a first electrode, and emission layer, and a second electrode.

On the other hand, Nishio et al. also disclose an electroluminescence display device. More specifically, Nishio et al. disclose, as shown in figure 1B and as stated in column 5 (line 20) – column 6 (line 65), an electroluminescence display device comprising: a substrate (1) having a first surface (upper surface – towards top of figure) and a second surface (lower surface – towards bottom of figure) wherein the second surface is on an opposite side of the substrate with respect to the first surface (clearly seen in figure 1B); a thin film transistor (3a, 3b, and 3c) formed over the first surface of the substrate (clearly seen in figure 1B); a planarizing film (14) formed over the thin film transistor (see column 5, lines 53 – 61), the planarizing film (14) comprising a resin (see column 5, lines 53 – 61) and having a planarized upper surface so as to reduce a step caused by at least the thin film transistor on a surface of the planarizing film (see column 5, lines 53 – 61); a first electrode (pixel electrode 2) formed on the planarizing film (14)

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and electrically connected to the thin film transistor (see column 4, lines 62 – 66); an emission layer (5) formed over the first electrode (2; clearly seen in figure 1B); a second electrode (common electrode 4) formed over the emission layer (clearly seen in figure 1B).

Hence, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included the construction of the electroluminescence display device (as taught by Nishio et al.) in the camera view finder having an electroluminescence display device (as disclosed by Takahara) for the advantage of forming luminescent pixel elements without decreasing the light emitting area of each of the luminescent pixel elements (see Nishio et al., column 2, lines 2 – 4).

However, Takahara in view of Nishio et al. still do not disclose wherein the second surface of the substrate has a spherical configuration which acts as a lens.

On the other hand, Nishiguchi also disclose a display device having a substrate with two opposing surfaces. Specifically, Nishiguchi teaches, in figure 7, a display device (131) having a substrate (101b) with a first surface (towards the left-side of the figure) and an opposing second surface (towards the right-side of the figure). Nishiguchi further teaches, in figure 7 and in column 20 (lines 1 – 30), wherein the second surface of the substrate has a spherical configuration which acts as a lens.

Hence, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a feature wherein the second surface of the substrate has a spherical configuration which acts as a lens (as taught by Nishiguchi et al.) in the electroluminescence display device (taught in-combination by Takahara in view of Nishio et al.)

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for the advantage of *ensuring increased width of viewing in left/right directions of an image viewing zone* (see Nishiguchi, column 6, lines 64 – 67).

11. As for **Claims 3 and 49**, Nishio et al. disclose, as stated in column 7 (lines 1 and 2), wherein said emission layer (5) comprises an organic electroluminescence material.

12. As for **Claims 34, 35, 52, and 53**, Takahara discloses, as shown in figures 218 and 219 and as stated in column 122 (line 37) – 123 (line 16), providing the electroluminescence display device in a video/digital camera or in a viewfinder of a video/digital camera.

13. As for **Claims 32 and 50**, Nishio et al. disclose wherein said emission layer (5) comprises an organic electroluminescence material; however, Nishio et al. do not disclose wherein said emission layer (5) comprises an inorganic electroluminescence material.

However, the Examiner takes **Official Notice** (MPEP § 2144.03) that both the concepts and advantages of using an inorganic electroluminescence material in a display device are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have used an inorganic electroluminescence material in the display device of Nishio et al. for the advantage of *providing a display device with materials that are not subject to degradation and therefore do not limit their use*.

14. **Claims 36 – 38, 40, 41, 54 – 56, 58, and 59** are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahara (US 6,219,113 B1) in view of Nishio et al. (US 6,046,547) in further view of Hamada (US 6,114,715) in even further view of Nishiguchi (US 6,046,787).

The Examiner respectfully notes the only difference between Claims 36 and 54 is that Claim 36 requires, *inter alia*, “a camera comprising: a body of the camera; and an

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electroluminescence display device attached to the body, the electroluminescence display device” and Claim 54 requires, *inter alia*, “a camera comprising: a body of the camera; and a view finder including an electroluminescence display device attached to the body, the electroluminescence display device”. Claim 54 appears to fully encompass Claim 36 – accordingly, they will be rejected together using the language of Claim 54.

15. For **Claims 36 and 54**, Takahara discloses, as shown in figures 218 and 219 and as stated in column 122 (line 37) – 123 (line 16), a camera comprising: a body of the camera (2186); and a view finder (see figure 219) including a display device (22) attached to the body, wherein the viewfinder is configured to project an image to only one eye of a user (see figure 218). Takahara further discloses, as stated in column 30 (lines 51 – 65), wherein the display device (22) may be an electroluminescence display device (“the present invention is not limited to the active matrix display panel ... [the] technical idea of the present invention ... is applicable to ... an organic EL display panel”).

While Takahara shows a camera having a view finder with an electroluminescence display device, Takahara does not disclose the construction or the internal components of the electroluminescence display device. Accordingly, Takahara does not necessarily disclose a substrate, a thin film transistor, a planarizing film, a first electrode, and emission layer, and a second electrode.

On the other hand, Nishio et al. also disclose an electroluminescence display device. More specifically, Nishio et al. disclose, as shown in figure 1B and as stated in column 5 (line 20) – column 6 (line 65), an electroluminescence display device comprising: a substrate (1) having a first surface (upper surface – towards top of figure) and a second surface (lower surface

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– towards bottom of figure) wherein the second surface is on an opposite side of the substrate with respect to the first surface (clearly seen in figure 1B); a thin film transistor (3a, 3b, and 3c) formed over the first surface of the substrate (clearly seen in figure 1B); a planarizing film (14) formed over the thin film transistor (see column 5, lines 53 – 61), the planarizing film (14) comprising a resin (see column 5, lines 53 – 61) and having a planarized upper surface so as to reduce a step caused by at least the thin film transistor on a surface of the planarizing film (see column 5, lines 53 – 61); a first electrode (pixel electrode 2) formed on the planarizing film (14) and electrically connected to the thin film transistor (see column 4, lines 62 – 66); an emission layer (5) formed over the first electrode (2; clearly seen in figure 1B); a second electrode (common electrode 4) formed over the emission layer (clearly seen in figure 1B).

Hence, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included the construction of the electroluminescence display device (as taught by Nishio et al.) in the camera view finder having an electroluminescence display device (as disclosed by Takahara) for the advantage of forming luminescent pixel elements without decreasing the light emitting area of each of the luminescent pixel elements (see Nishio et al., column 2, lines 2 – 4).

However, Takahara in view of Nishio et al. still do not disclose (a) wherein the thin film transistor has an LDD region and a gate electrode partly overlapping the LDD region; and (b) wherein the second surface of the substrate has a spherical configuration which acts as a lens.

In regards to item (a), Hamada also discloses a electroluminescence display device having a thin film transistor. Specifically, Hamada teaches, in figure 8, an electroluminescence display device (41) having a thin film transistor (43). Hamada further teaches, in figure 8 and in

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column 7 (line 62) – column 8 (line 41), wherein the thin film transistor (41) has an LDD region and a gate electrode (46) partly overlapping the LDD region (clearly seen in figure 8).

Hence, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a feature wherein the thin film transistor has an LDD region and a gate electrode partly overlapping the LDD region (as taught by Hamada) in the electroluminescence display device (taught in-combination by Takahara in view Nishio et al.) for the advantage of *increasing the ON/OFF ratio of the TFT and to suppress leak current in the OFF state* (see Hamada, column 9, lines 17 – 20).

In regards to item (b), Nishiguchi also disclose a display device having a substrate with two opposing surfaces. Specifically, Nishiguchi teaches, in figure 7, a display device (131) having a substrate (101b) with a first surface (towards the left-side of the figure) and an opposing second surface (towards the right-side of the figure). Nishiguchi further teaches, in figure 7 and in column 20 (lines 1 – 30), wherein the second surface of the substrate has a spherical configuration which acts as a lens.

Hence, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a feature wherein the second surface of the substrate has a spherical configuration which acts as a lens (as taught by Nishiguchi et al.) in the electroluminescence display device (taught in-combination by Takahara in view Nishio et al. – as modified by Hamada) for the advantage of *ensuring increased width of viewing in left/right directions of an image viewing zone* (see Nishiguchi et al., column 6, lines 64 – 67).

16. As for **Claims 37 and 55**, Nishio et al. disclose, as stated in column 7 (lines 1 and 2), wherein said emission layer (5) comprises an organic electroluminescence material.

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17. As for **Claims 40, 41, 58, and 59**, Takahara discloses, as shown in figures 218 and 219 and as stated in column 122 (line 37) – 123 (line 16), providing the electroluminescence display device in a video/digital camera or in a viewfinder of a video/digital camera.

18. As for **Claims 38 and 56**, Nishio et al. disclose wherein said emission layer (5) comprises an organic electroluminescence material; however, Nishio et al. do not disclose wherein said emission layer (5) comprises an inorganic electroluminescence material.

However, the Examiner takes **Official Notice** (MPEP § 2144.03) that both the concepts and advantages of using an inorganic electroluminescence material in a display device are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have used an inorganic electroluminescence material in the display device of Nishio et al. for the advantage of *providing a display device with materials that are not subject to degradation and therefore do not limit their use.*

Allowable Subject Matter

19. **Claims 66 – 69** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art, e.g., Nishiguchi, discloses where second surface of a display substrate has a spherical configuration which acts as a lens; however, the closest prior art does not teach or fairly suggest wherein the second surface of the substrate has a single spherical configuration which acts as a single lens.

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Conclusion

20. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, David Ometz can be reached on 571.272.7593. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Justin P. Misleh/
Primary Examiner
Group Art Unit 2622
July 30, 2009**